Appendix E

Landfill Design and Operational Considerations

DESIGN AND OPERATIONAL CONSIDERATIONS FOR LANDFILLS PROPOSING TO ACCEPT DREDGED MATERIALS CONTAMINATED WITH PCBs AT LEVELS BELOW 50 PPM

1. The dredged material should be dewatered and solidified, as necessary, to pass the paint filter test prior to disposal at the site.

2. The dredged material should not be used as daily cover or otherwise dispersed over the landfill surface.

3. The dredged material placed in the site should not be commingled with any potentially incompatible waste. Potentially incompatible wastes are those wastes that have the capacity to mobilize PCBs.

4. The dredged material should be segregated in the site in the following manner:

   a. The dredged material should be placed as a monofill, rather than mixed directly with other waste. The dredged material should be placed as close as practical to the final cover to minimize the amount of commingling with other wastes and the amount of waste materials placed above it.

   b. The monofill should be underlain by a sand and geotextile to prevent migration of particles from the dredged material. The monofill should be confined and covered by sand, foundry sand, bottom ash or other material acceptable to the Department.

   c. The monofill should have adequate stability to support it's own weight and the weight of any materials placed over it without slumping and be able to maintain stable slopes.

   d. The dredged material should be placed at the greatest density practical. At a minimum, the dredged material should be compacted in 6 to 12 inch lifts. The dredged material should be covered with sand drainage and vent layers at 3 to 10 foot lift spacing depending on the strength of the dredged materials. Intermediate layers may not be necessary for small volumes of dredged materials.

   e. The location of the dredged material should be identified by survey, and records maintained. The disturbance of the dredged material should be minimized once they are placed in the site (as in drilling of gas extraction wells, or during remedial actions).

   f. The dredged material should be disposed of in a manner which prevents wind-blown dust exposure. The Department may require periodic soil cover or other means of preventing fugitive dust.

   g. The dredged material should be placed in such a way to facilitate water movement around it rather than through it.

5. Measures should be taken to contain the dredged material to the specified disposal area. This would include a vehicle wash for cleaning equipment as necessary. Wash water should either be collected and treated as leachate or allowed to seep into the waste mass.

6. Health and safety considerations for the disposal project should be addressed with a site-specific health and safety plan.

7. Initial testing of the landfill's leachate for PCBs should be performed prior to accepting dredged material. The specific analytical method is defined as method 8080 found in "Test Methods for Evaluating Solid Waste", SW-846, U.S. EPA, 3rd edition, November, 1986. If testing of the leachate for PCBs has been done in the past, that testing will be sufficient to establish baseline.

8. Annual PCB testing of the leachate should be performed and should continue through the active life and long-term care period of the site. The Department should be notified of detectable levels of PCBs in the leachate within 60 days of sampling. Should significant change in the levels of PCBs detected in the leachate occur, the Department may modify the monitoring schedule.

9. If there is a significant change in the levels of PCBs detected in the leachate, PCBs should be added to the groundwater monitoring program for the Subtitle D wells.

10. The established long-term care financial responsibility should be modified, if necessary, to reflect the additional cost associated with PCB leachate monitoring. If PCBs are added to the groundwater monitoring program the long-term care costs should be modified at that time.